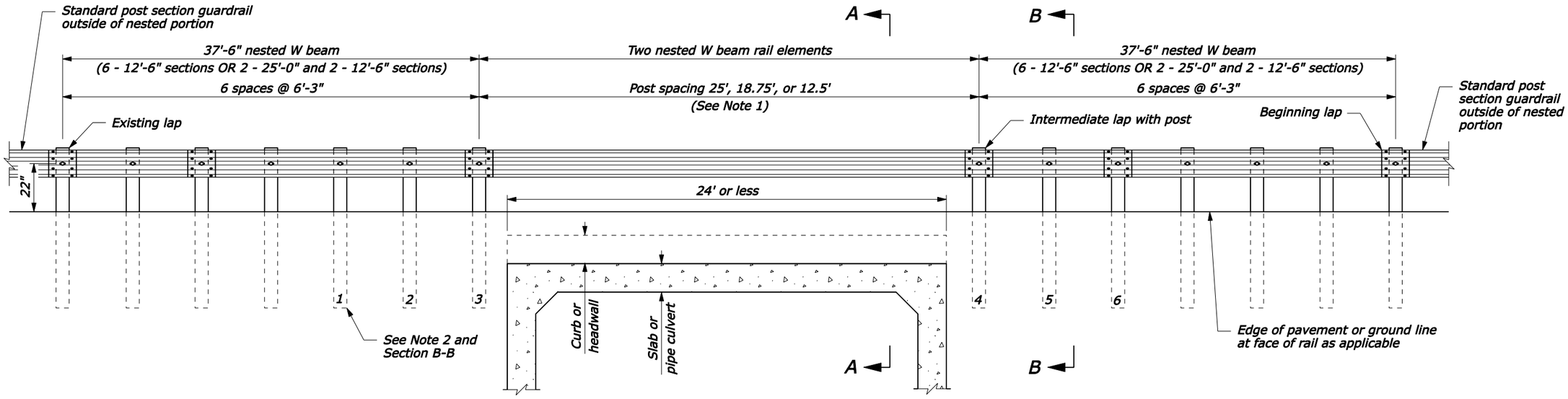
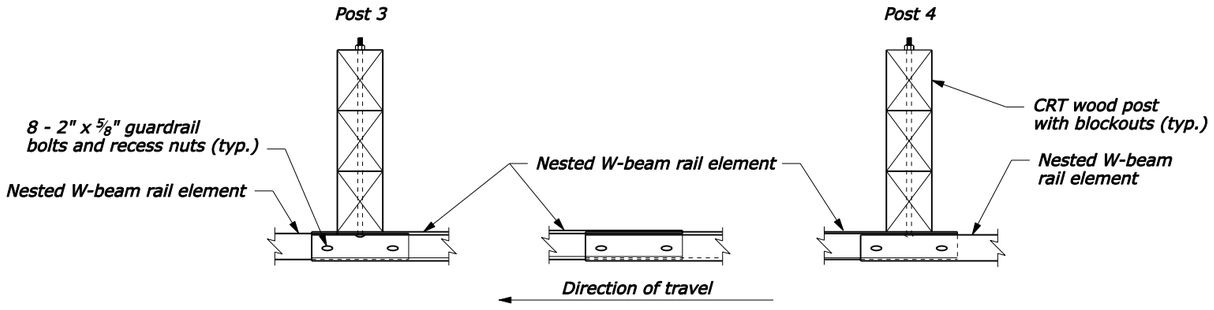
STATE	PROJECT	SHEET NUMBER

NOTE:

1. 25'-0" rail lengths may be used to eliminate the intermediate lap without a post. Do not place a lap without a post unless needed due to length of gap.
2. Posts 1 thru 6 are CRT posts with two blockouts. See Section B-B for details.
3. Install the back face of the nested guardrail a minimum of 5'-0" from the face of the curb-like headwall.



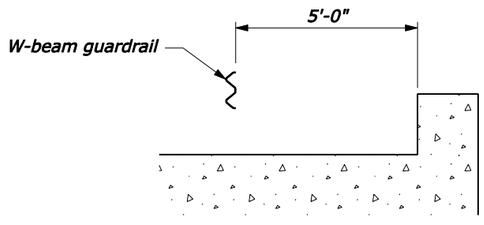
ELEVATION



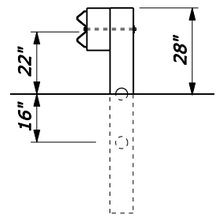
ENDING LAP

BEGINNING LAP

INTERMEDIATE LAP WITHOUT POST



SECTION A-A
(See Note 3)



SECTION B-B
(See Note 2)

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
FEDERAL LANDS HIGHWAY

U.S. CUSTOMARY STANDARD

G4 W-BEAM GUARDRAIL LONG SPAN, DOUBLE-NESTED GUARDRAIL SYSTEM

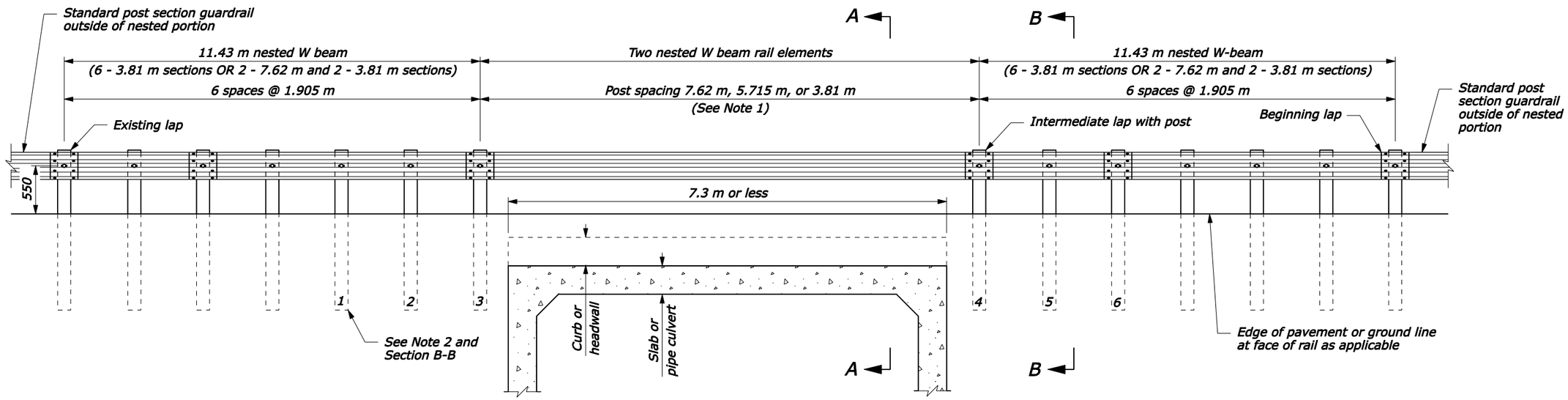
STANDARD APPROVED FOR USE 1/1994
REVISED: 4/1994 6/2005

STANDARD 617-24

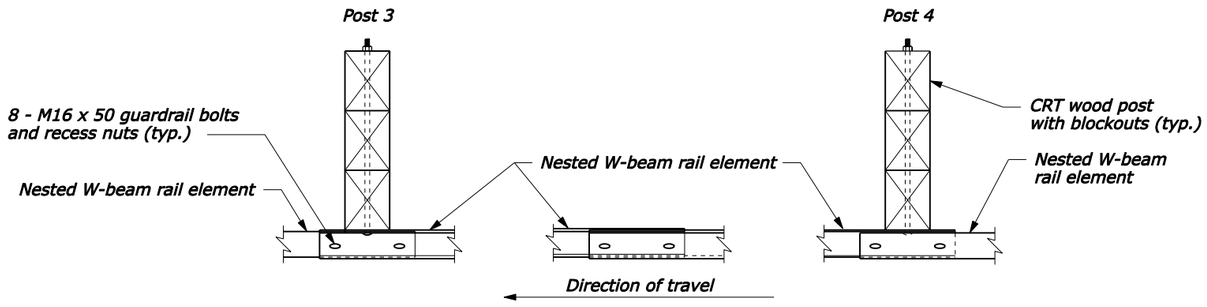
STATE	PROJECT	SHEET NUMBER

NOTE:

1. 7.62 m rail lengths may be used to eliminate the intermediate lap without a post. Do not place a lap without a post unless needed due to length of gap.
2. Posts 1 thru 6 are CRT posts with two blockouts. See Section B-B for details.
3. Install the back face of the nested guardrail a minimum of 1.5 m from the face of the curb-like headwall.
4. Dimensions without units are millimeters.



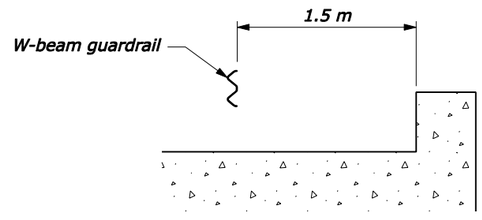
ELEVATION



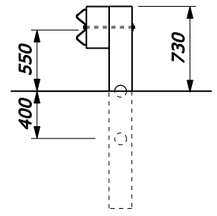
ENDING LAP

BEGINNING LAP

INTERMEDIATE LAP WITHOUT POST



SECTION A-A
(See Note 3)



SECTION B-B
(See Note 2)

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
FEDERAL LANDS HIGHWAY

METRIC STANDARD

G4 W-BEAM GUARDRAIL LONG-SPAN, DOUBLE-NESTED GUARDRAIL SYSTEM

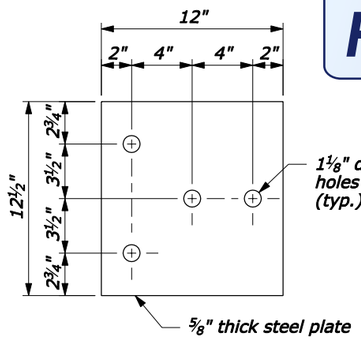
STANDARD APPROVED FOR USE 3/1996
REVISED: 8/1997 6/2005

STANDARD M617-24

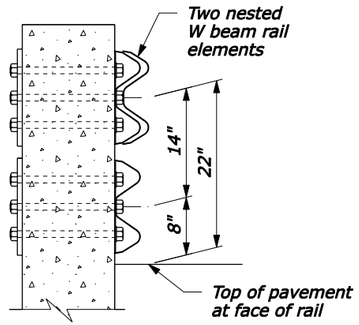
17-Jun-2005 06:46 AM
F:\StanDraw\st61724.dgn [Metric]

STATE	PROJECT	SHEET NUMBER

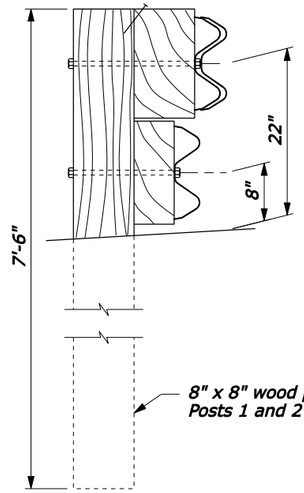
FOR COMMENT



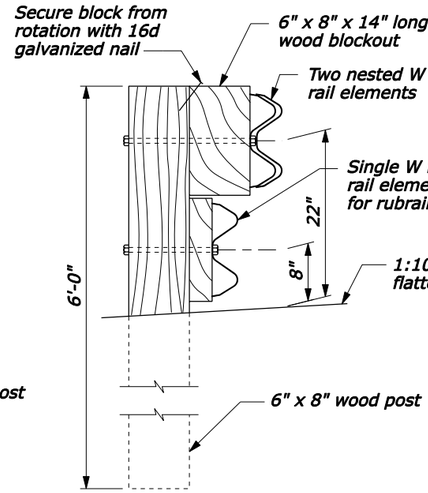
BEARING PLATE



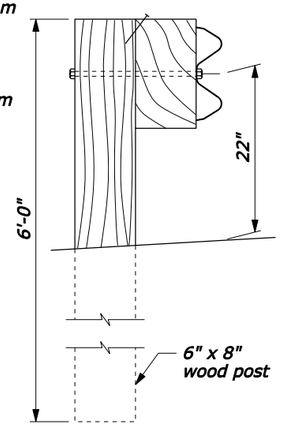
SECTION A-A



SECTION B-B



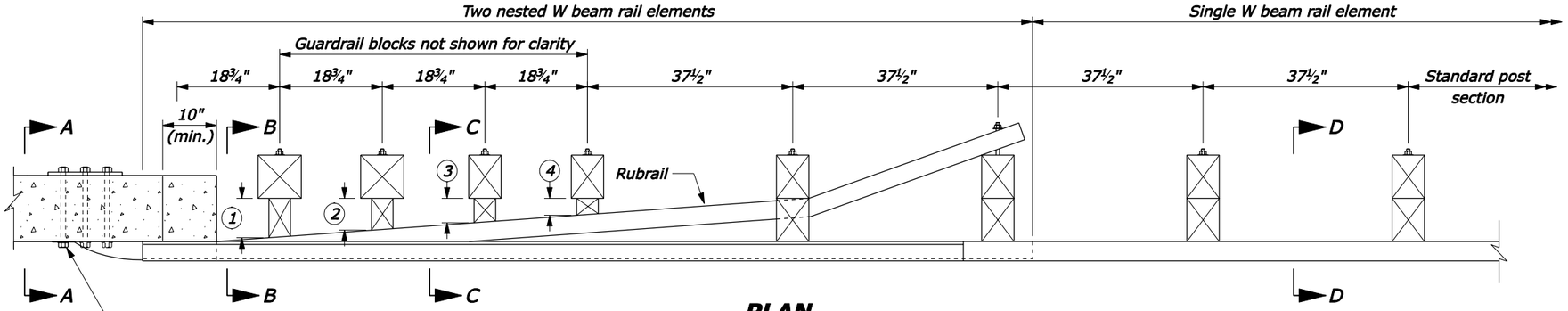
SECTION C-C



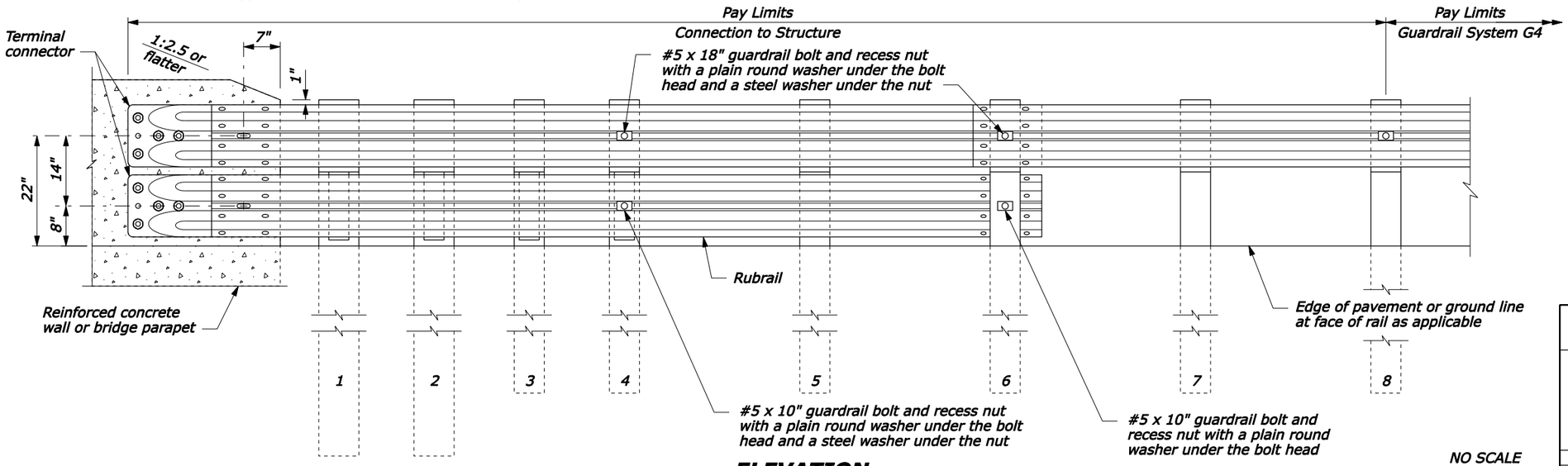
SECTION D-D

NOTE:

1. The rubrail may be shop bent in the last 37½" to facilitate installation.
2. CENTER drill wood blocks for rubrail located on posts 1 through 4. Secure blocks to post 1 through 3 with M16 carriage bolts.
3. Posts 1, 2, 3, 4 and 6 require an additional hole to attach lower wood blocks and/or the rubrail.
4. Do not bolt nested W beam or rubrail W beam to posts and blocks on posts 1, 2, 3 and 5. Bolt blocks directly to posts.
5. Reinforced concrete wall or bridge parapet must be capable of developing a 59.6 kip pull out strength.



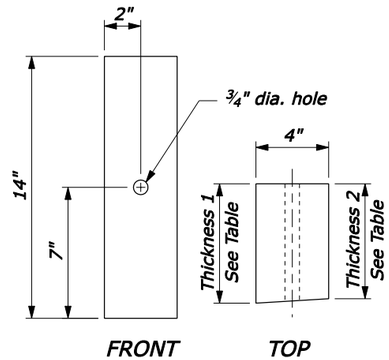
PLAN



ELEVATION

NO SCALE

WOOD BLOCKS FOR RUBRAIL		
POST	THICKNESS 1	THICKNESS 2
①	6½"	6¼"
②	5⅜"	5"
③	4"	3⅝"
④	2⅝"	2⁷⁄₁₆"
⑤	NO BLOCK	NO BLOCK



WOOD BLOCK FOR RUBRAIL

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
FEDERAL LANDS HIGHWAY

U.S. CUSTOMARY STANDARD

G4 W-BEAM GUARDRAIL CONNECTION TO VERTICAL FACE STRUCTURE WOOD POSTS

STANDARD APPROVED FOR USE --/----

REVISED:
DRAFT: 5/2005

STANDARD 617-25

5/2/2005

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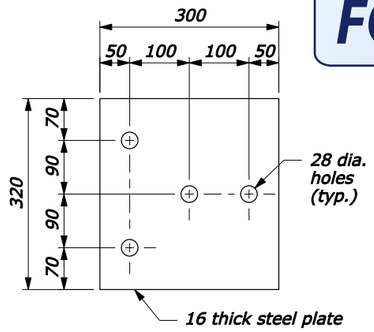
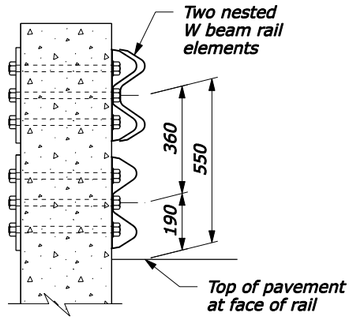
STATE	PROJECT	SHEET NUMBER

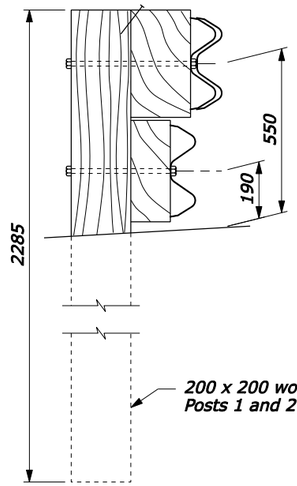
FOR COMMENT



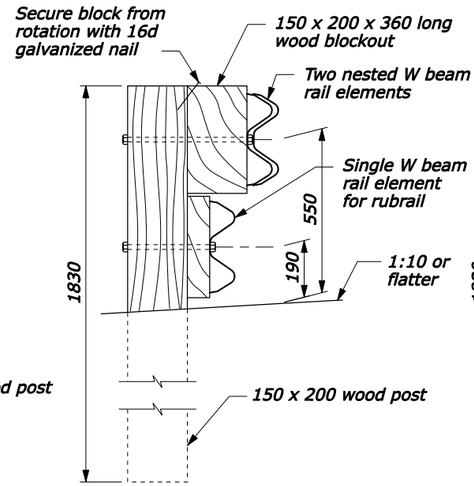
BEARING PLATE



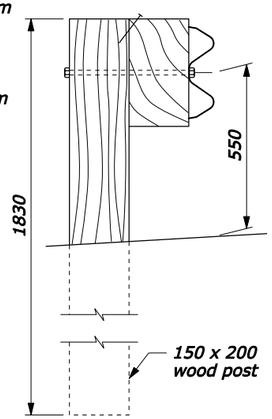
SECTION A-A



SECTION B-B



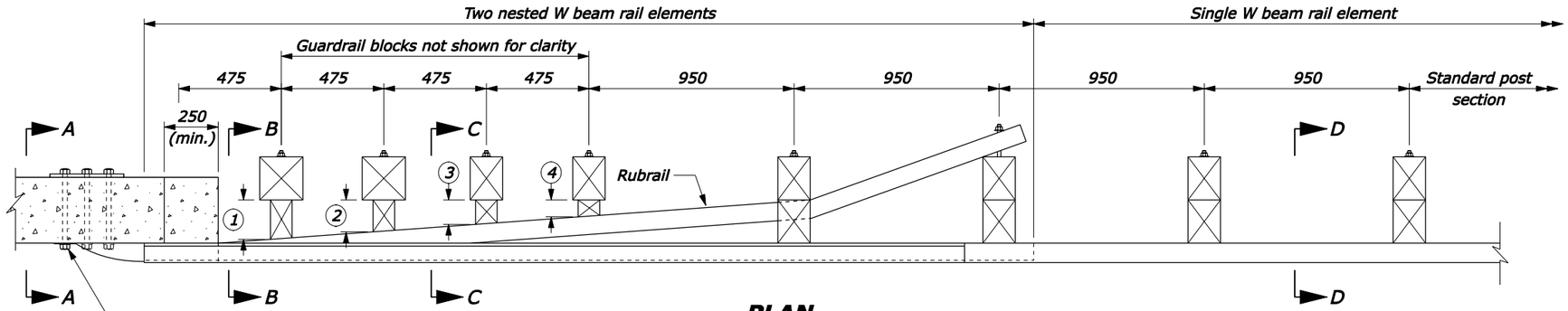
SECTION C-C



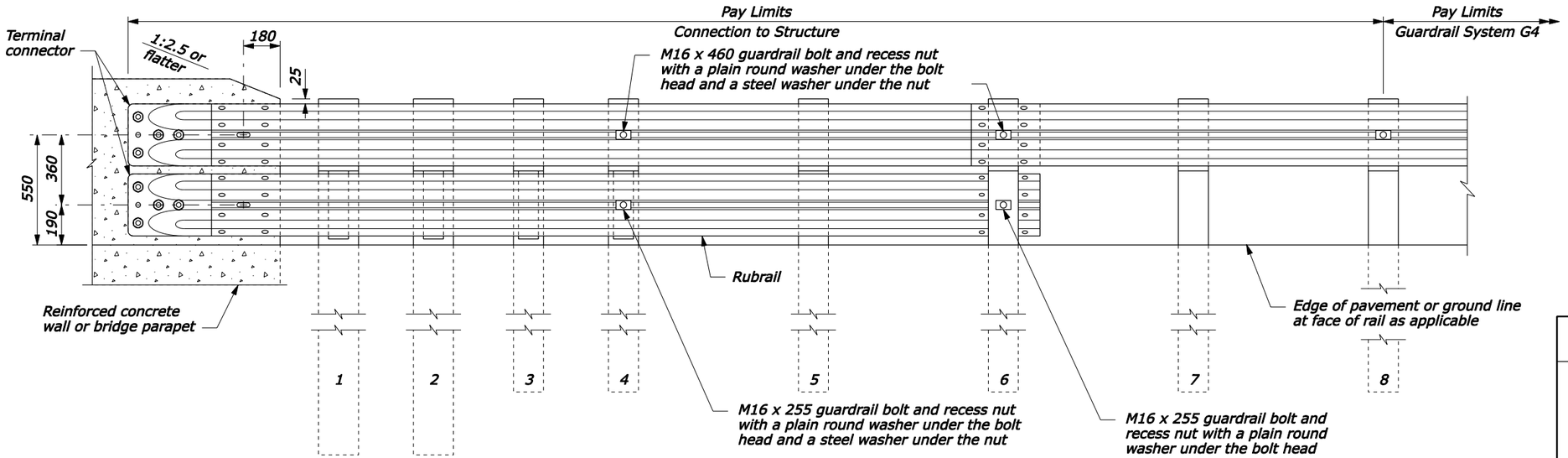
SECTION D-D

NOTE:

1. The rubrail may be shop bent in the last 950 mm to facilitate installation.
2. CENTER drill wood blocks for rubrail located on posts 1 through 4. Secure blocks to post 1 through 3 with M16 carriage bolts.
3. Posts 1, 2, 3, 4 and 6 require an additional hole to attach lower wood blocks and/or the rubrail.
4. Do not bolt nested W beam or rubrail W beam to posts and blocks on posts 1, 2, 3 and 5. Bolt blocks directly to posts.
5. Reinforced concrete wall or bridge parapet must be capable of developing a 265 kN pull out strength.
6. Furnish hardware in the metric sizes shown. Equivalent US Customary sizes may be used when metric sizes are not available.
7. Dimensions without units are millimeters.



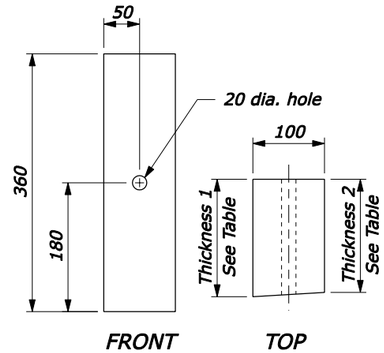
PLAN



ELEVATION

NO SCALE

WOOD BLOCKS FOR RUBRAIL		
POST	THICKNESS 1	THICKNESS 2
①	164	158
②	131	125
③	99	93
④	67	61
⑤	NO BLOCK	NO BLOCK



WOOD BLOCK FOR RUBRAIL

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
FEDERAL LANDS HIGHWAY

METRIC STANDARD

G4 W-BEAM GUARDRAIL CONNECTION TO VERTICAL FACE STRUCTURE WOOD POSTS

STANDARD APPROVED FOR USE 3/1996

REVISED:
DRAFT: 5/2005

STANDARD M617-25

5/2/2005

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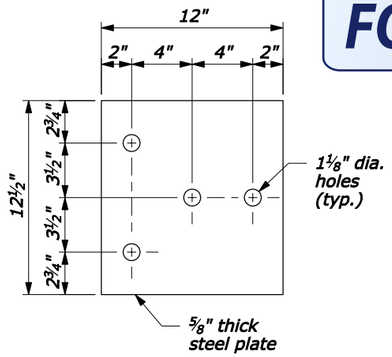
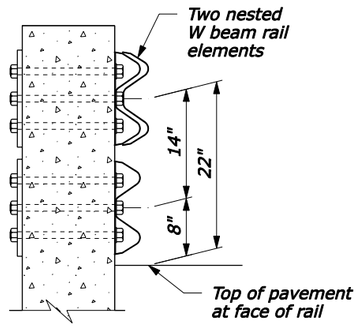
STATE	PROJECT	SHEET NUMBER

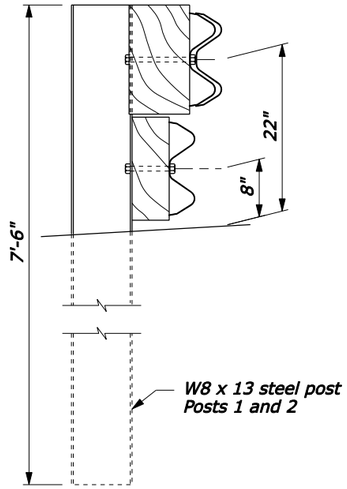
FOR COMMENT



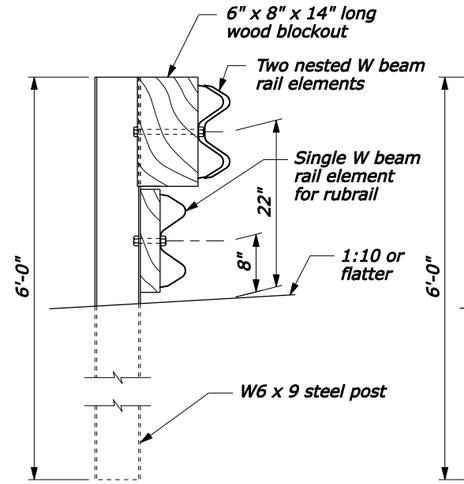
BEARING PLATE



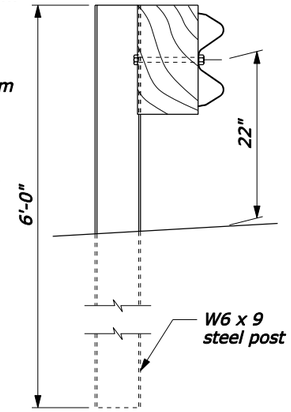
SECTION A-A



SECTION B-B



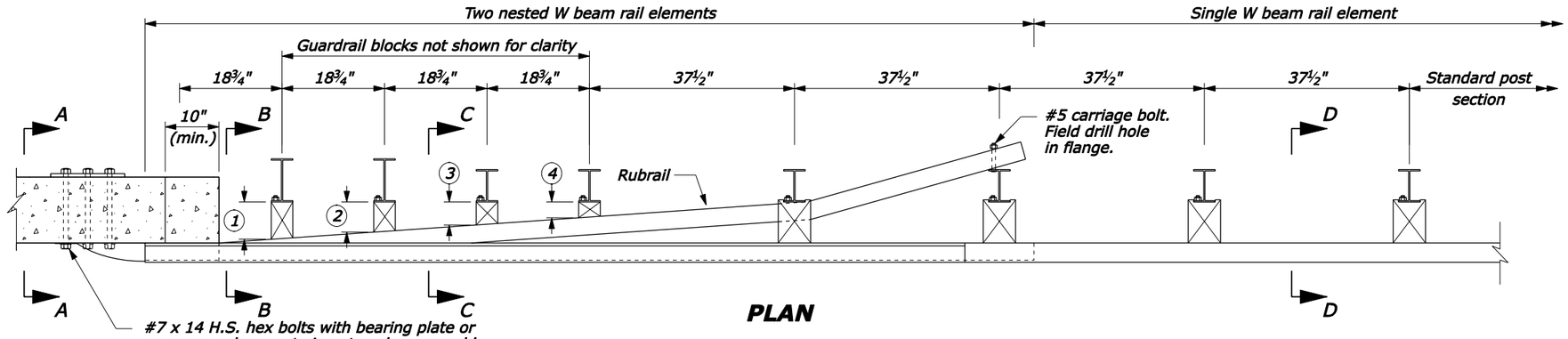
SECTION C-C



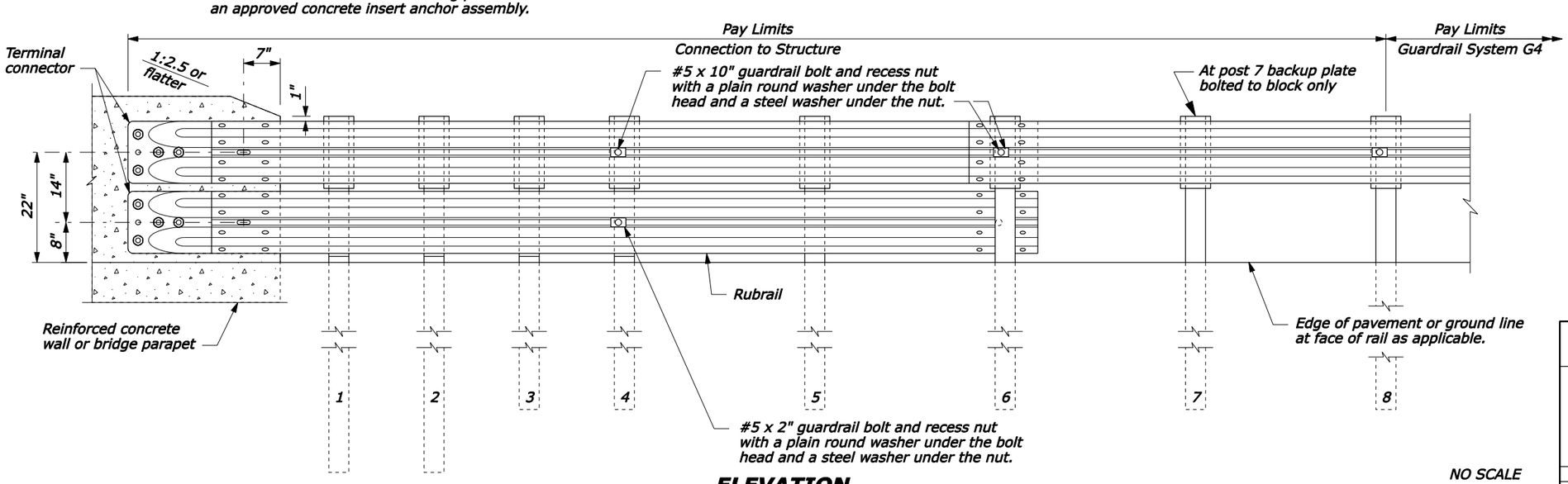
SECTION D-D

NOTE:

1. The rubrail may be shop bent in the last 37½" to facilitate installation.
2. Offset drill wood blocks for rubrail to sit squarely on the post flange posts 1 through 4. Secure blocks to post 1 through 3 with #5 carriage bolts.
3. Posts 1, 2, 3, 4 and 6 require an additional hole to attach lower wood blocks and/or the rubrail.
4. Do not bolt nested W beam or rubrail W beam to posts and blocks on posts 1, 2, 3 and 5. Bolt blocks directly to posts.
5. Reinforced concrete wall or bridge parapet must be capable of developing a 59.6 kip pull out strength.



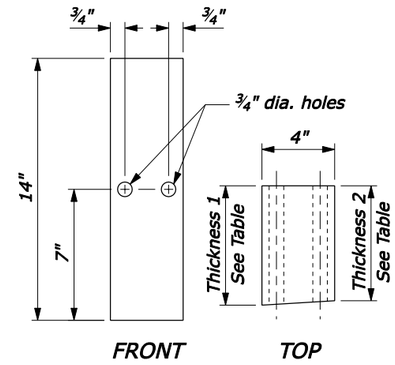
PLAN



ELEVATION

NO SCALE

WOOD BLOCKS FOR RUBRAIL		
POST	THICKNESS 1	THICKNESS 2
①	6½"	6¼"
②	5⅜"	5"
③	4"	3⅝"
④	2⅝"	2⁷⁄₁₆"
⑤	NO BLOCK	NO BLOCK



WOOD BLOCK FOR RUBRAIL

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
FEDERAL LANDS HIGHWAY

U.S. CUSTOMARY STANDARD

G4 W-BEAM GUARDRAIL CONNECTION TO VERTICAL FACE STRUCTURE STEEL POSTS

STANDARD APPROVED FOR USE --/----

REVISED:
DRAFT: 5/2005

STANDARD 617-26

5/2/2005

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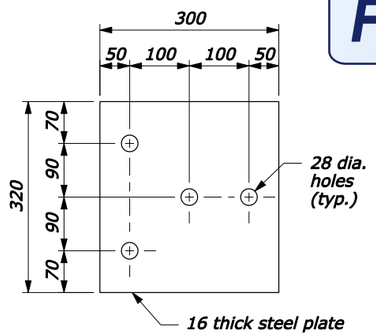
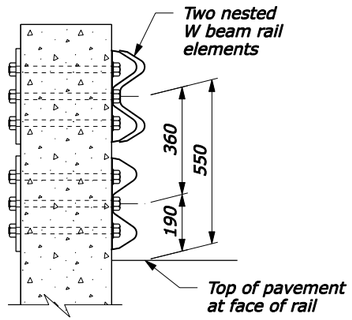
STATE	PROJECT	SHEET NUMBER

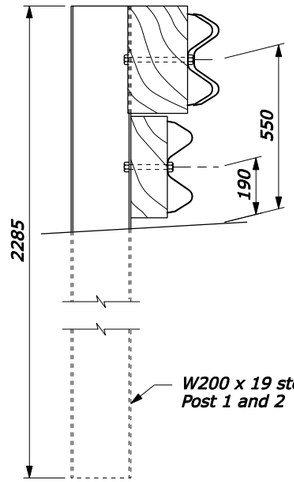
FOR COMMENT



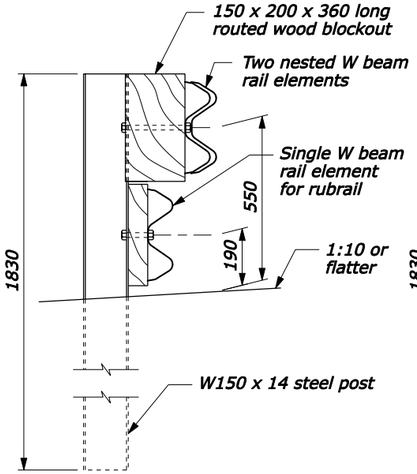
BEARING PLATE



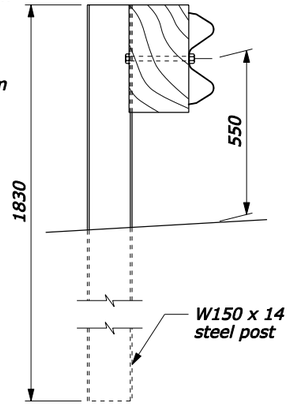
SECTION A-A



SECTION B-B



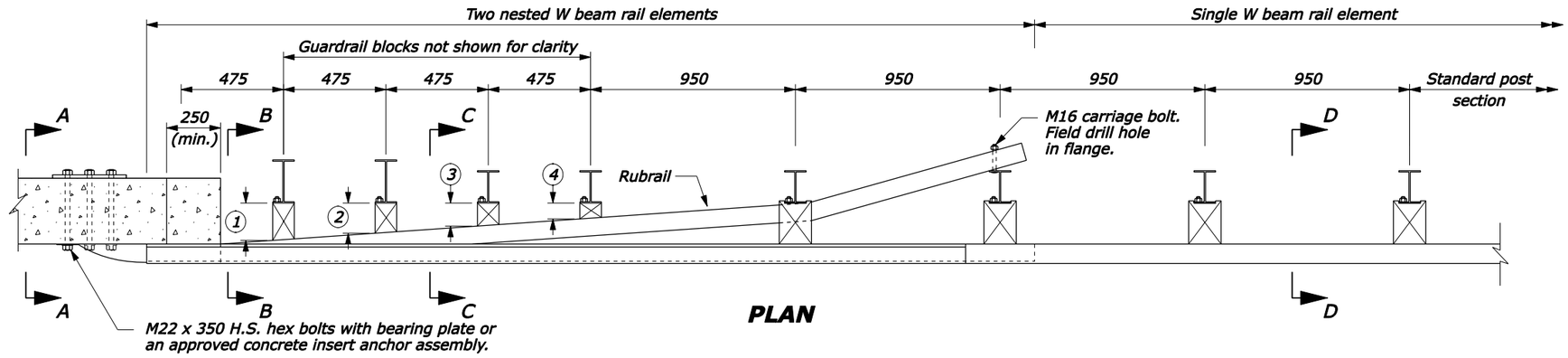
SECTION C-C



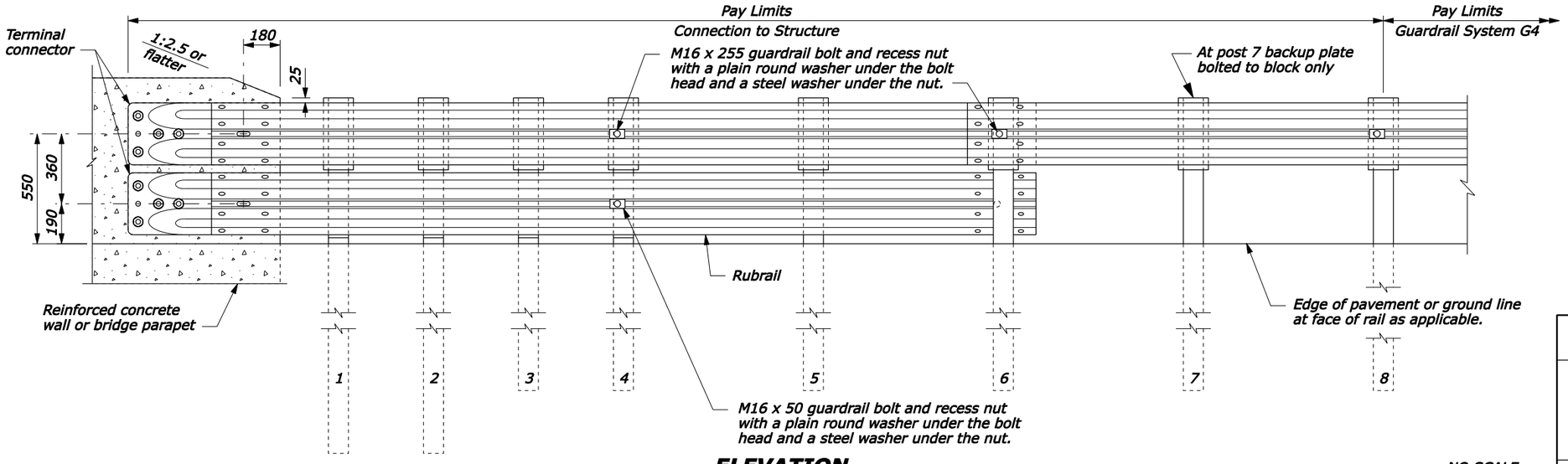
SECTION D-D

NOTE:

1. The rubrail may be shop bent in the last 950 mm to facilitate installation.
2. Offset drill wood blocks for rubrail to sit squarely on the post flange posts 1 through 4. Secure blocks to post 1 through 3 with M16 carriage bolts.
3. Posts 1, 2, 3, 4 and 6 require an additional hole to attach lower wood blocks and/or the rubrail.
4. Do not bolt nested W beam or rubrail W beam to posts and blocks on posts 1, 2, 3 and 5. Bolt blocks directly to posts.
5. Reinforced concrete wall or bridge parapet must be capable of developing a 265 kN pull out strength.
6. Furnish hardware in the metric sizes shown. Equivalent US Customary sizes may be used when metric sizes are not available.
7. Dimensions without units are millimeters.



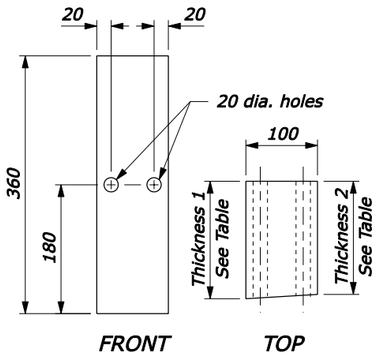
PLAN



ELEVATION

NO SCALE

WOOD BLOCKS FOR RUBRAIL		
POST	THICKNESS 1	THICKNESS 2
①	164	158
②	131	125
③	99	93
④	67	61
⑤	NO BLOCK	NO BLOCK



WOOD BLOCK FOR RUBRAIL

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
FEDERAL LANDS HIGHWAY

METRIC STANDARD

G4 W-BEAM GUARDRAIL CONNECTION TO VERTICAL FACE STRUCTURE STEEL POSTS

STANDARD APPROVED FOR USE 3/1996

REVISED:
DRAFT: 5/2005

STANDARD M617-26

5/2/2005

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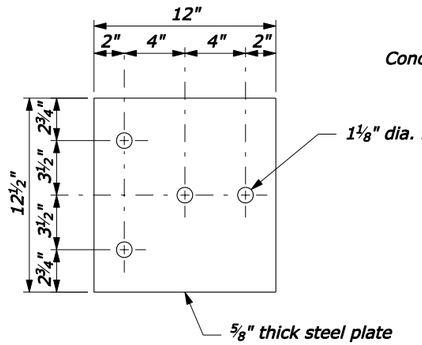
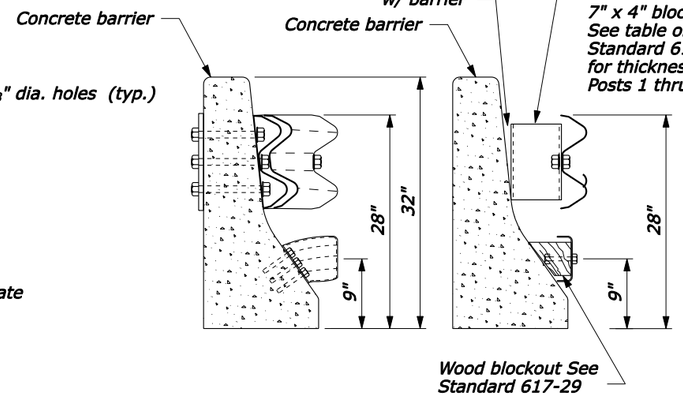
STATE	PROJECT	SHEET NUMBER

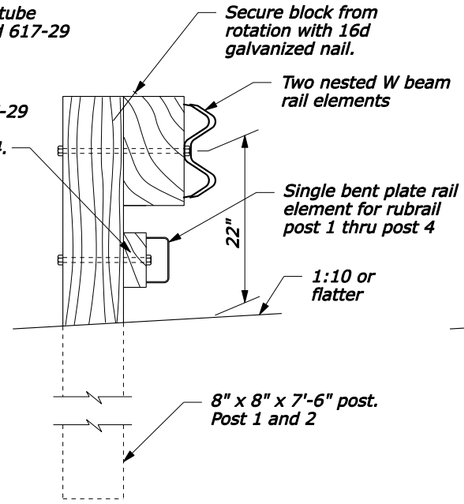


BEARING PLATE

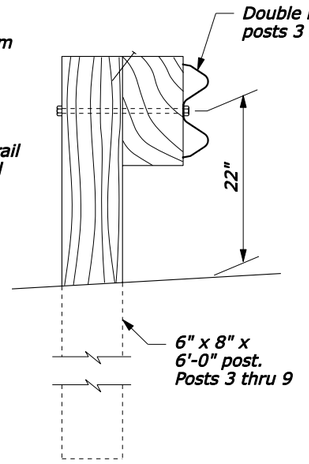


SECTION A-A

SECTION B-B



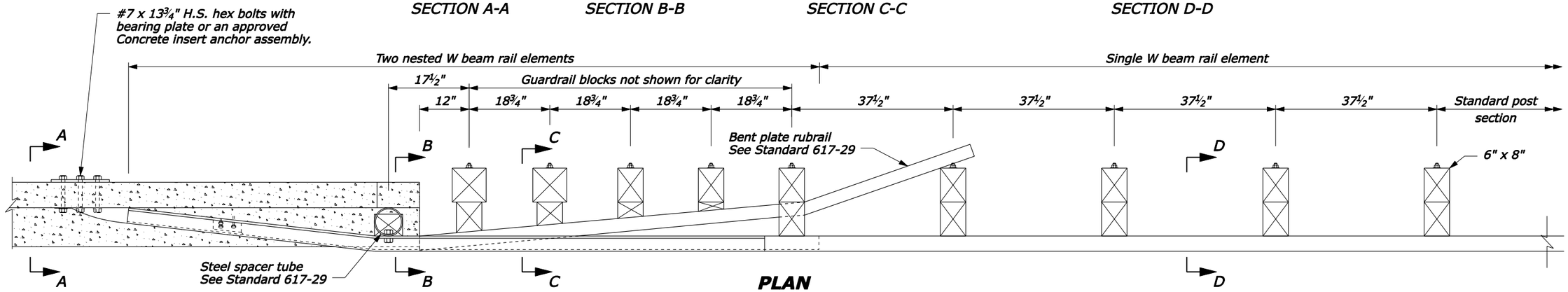
SECTION C-C



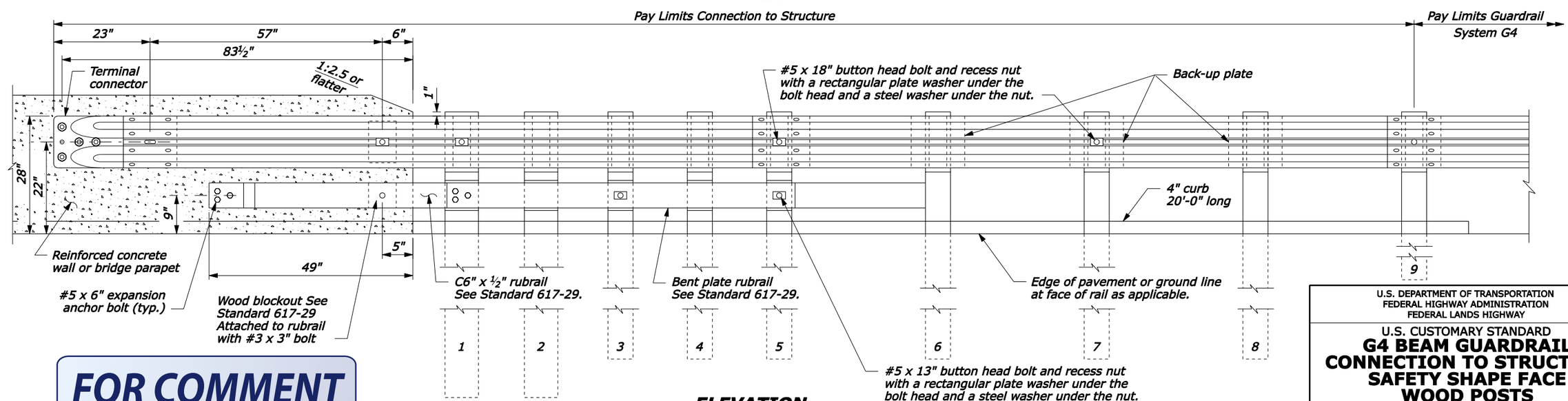
SECTION D-D

NOTE:

1. Posts 1 through 5 require an additional hole to attach lower wood blocks and/or rubrail.
2. Center drill wood blocks for rubrail located on posts 1 through 4. Secure blocks to posts 2 and 4. Secure rubrail and blocks to posts 1, 3, and 5 using M16 carriage bolts.
3. Do not bolt W beam to posts and blocks at posts 2 and 4.
4. Reinforced concrete wall or bridge parapet must be capable of developing a 59.6 kip pull out strength.



PLAN



ELEVATION

NO SCALE

FOR COMMENT

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
FEDERAL LANDS HIGHWAY

U.S. CUSTOMARY STANDARD

G4 BEAM GUARDRAIL CONNECTION TO STRUCTURE SAFETY SHAPE FACE WOOD POSTS

STANDARD APPROVED FOR USE --/----

REVISED:
DRAFT: 6/2004

STANDARD 617-27

23-Jun-2004 04:07 PM

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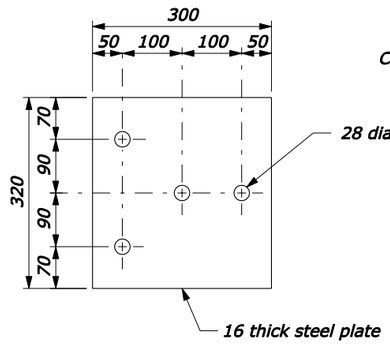
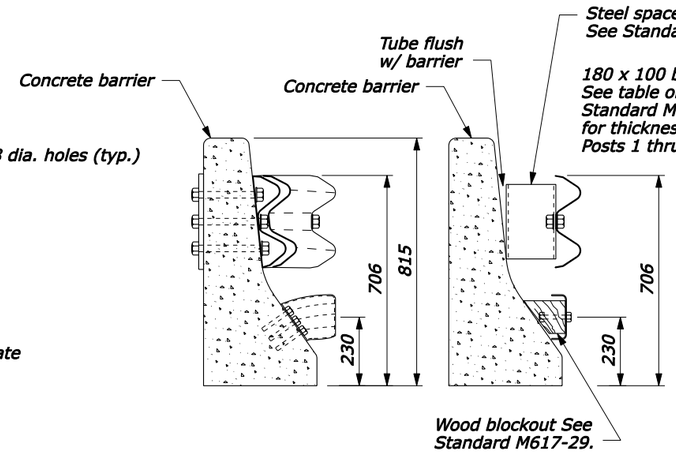
STATE	PROJECT	SHEET NUMBER

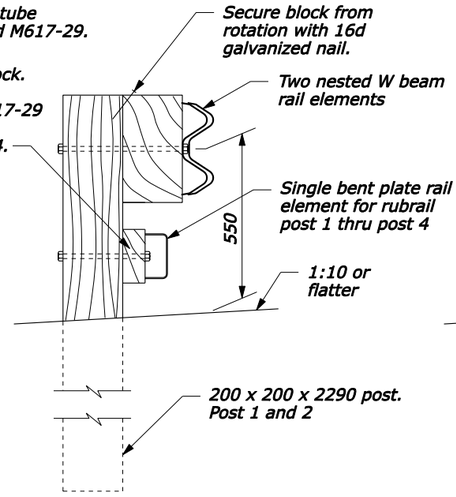


BEARING PLATE

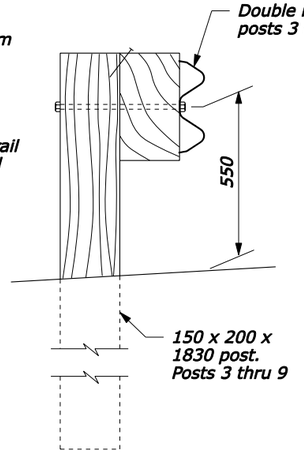


SECTION A-A

SECTION B-B



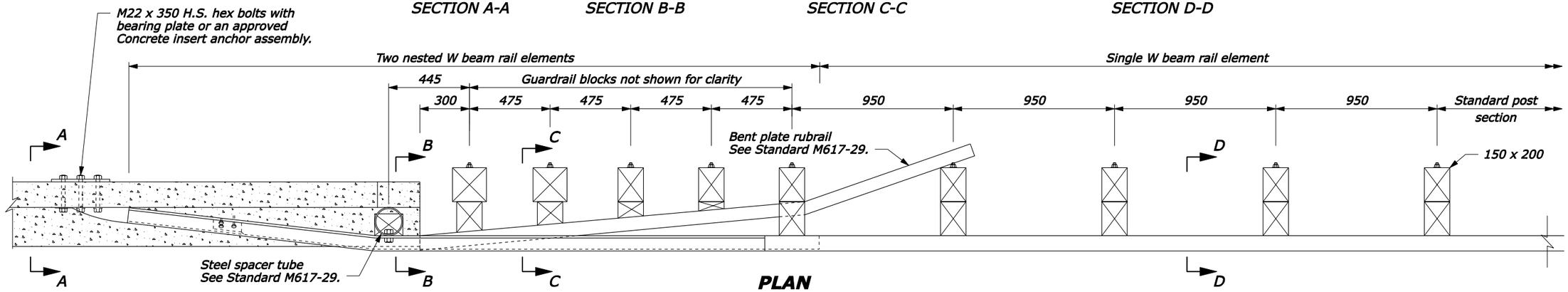
SECTION C-C



SECTION D-D

NOTE:

1. Posts 1 through 5 require an additional hole to attach lower wood blocks and/or rubrail.
2. Center drill wood blocks for rubrail located on posts 1 through 4. Secure blocks to posts 2 and 4. Secure rubrail and blocks to posts 1, 3, and 5 using M16 carriage bolts.
3. Do not bolt W beam to posts and blocks at posts 2 and 4.
4. Reinforced concrete wall or bridge parapet must be capable of developing a 265 kN pull out strength.
5. Furnish hardware in the metric sizes shown. Equivalent U.S. Customary sizes may be used when metric sizes are not available.
6. Dimensions without units are millimeters.



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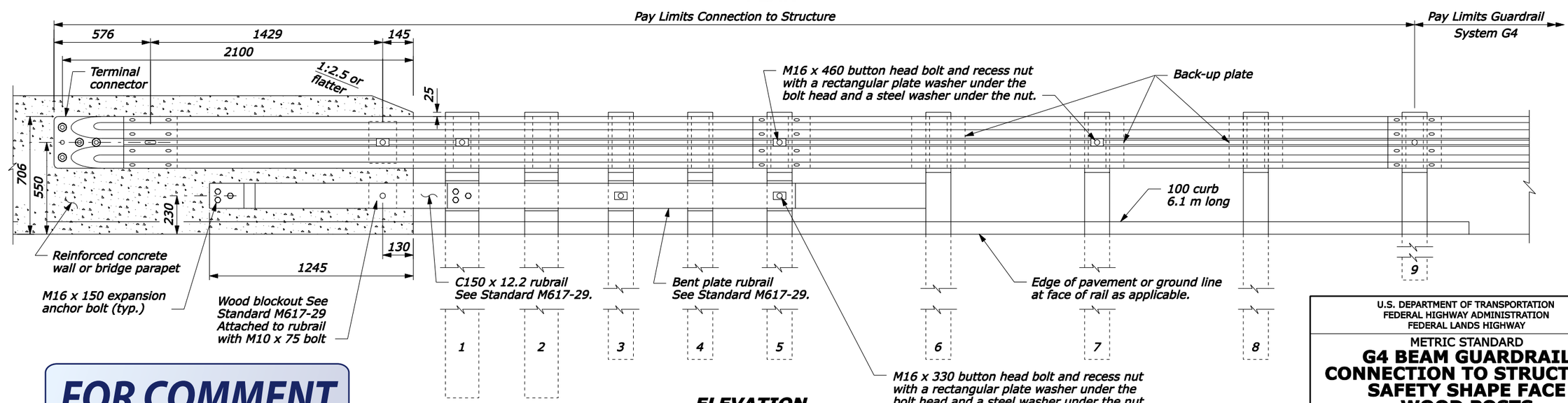

ELEVATION

NO SCALE

FOR COMMENT

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
FEDERAL LANDS HIGHWAY

METRIC STANDARD

G4 BEAM GUARDRAIL CONNECTION TO STRUCTURE SAFETY SHAPE FACE WOOD POSTS

STANDARD APPROVED FOR USE 3/1996

REVISED: 1/1998
DRAFT: 6/2004

STANDARD
M617-27

23-Jun-2004 04:11 PM

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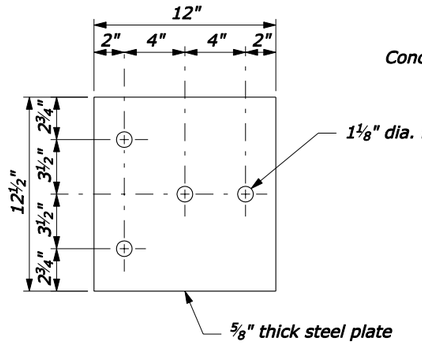
STATE	PROJECT	SHEET NUMBER



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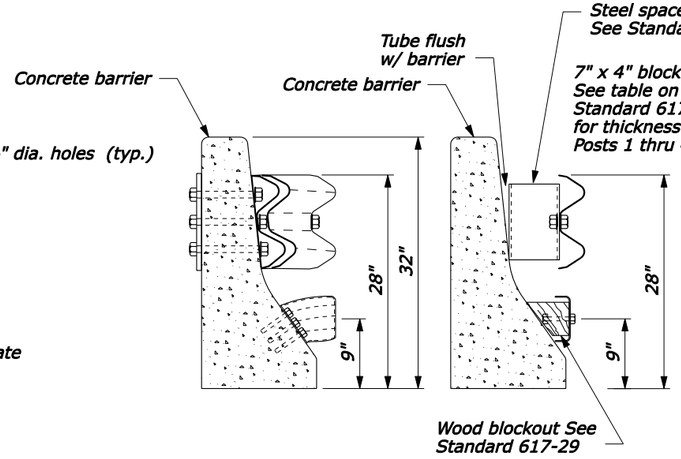
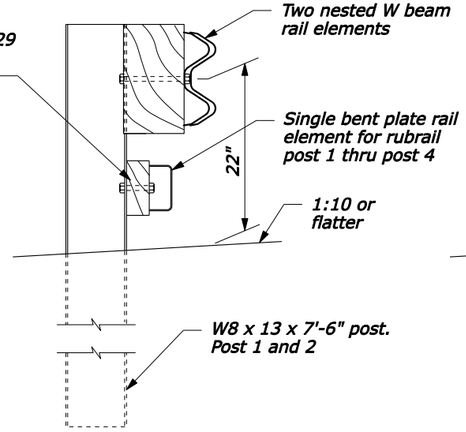
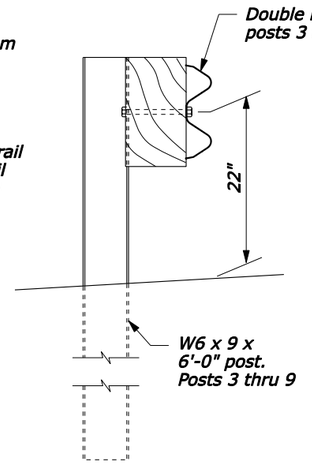


SECTION A-A SECTION B-B



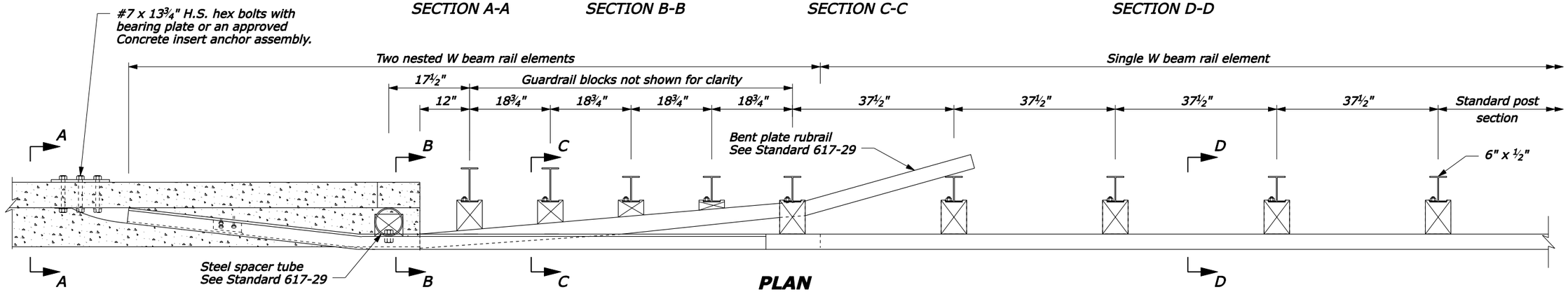
SECTION C-C



SECTION D-D

NOTE:

1. Posts 1 through 5 require an additional hole to attach lower wood blocks and/or rubrail.
2. Offset drill wood blocks for rubrail to sit squarely on the post flange on posts 1 through 4. Secure blocks to posts 2 and 4. Secure rubrail and blocks to post flange on posts 1, 3, and 5 using #5 carriage bolts.
3. Do not bolt W beam to posts and blocks at posts 2 and 4.
4. Reinforced concrete wall or bridge parapet must be capable of developing a 59.6 kip pull out strength.



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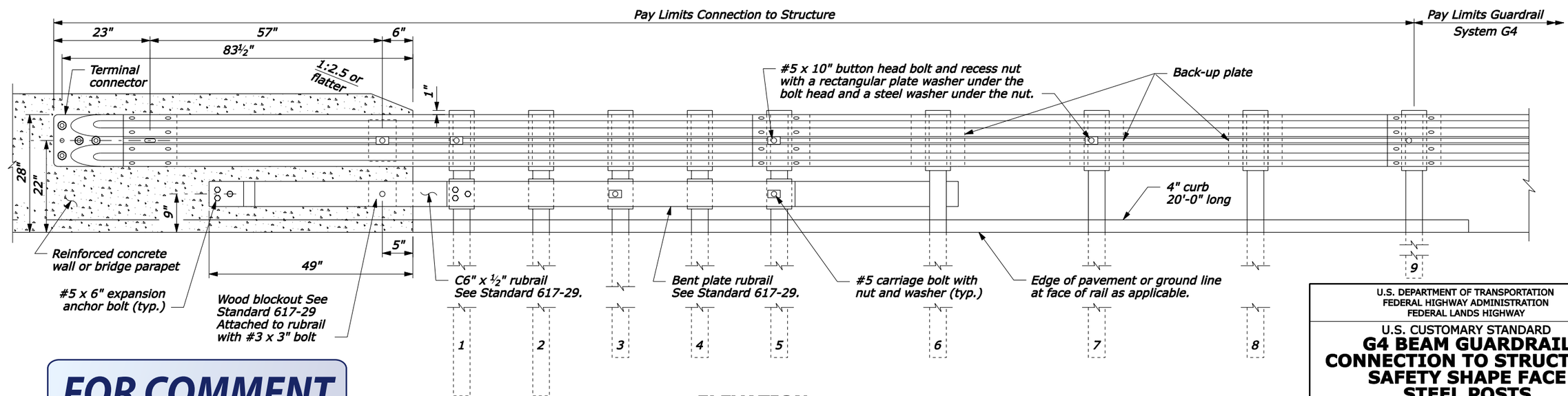

ELEVATION

NO SCALE

FOR COMMENT

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
FEDERAL LANDS HIGHWAY

U.S. CUSTOMARY STANDARD

G4 BEAM GUARDRAIL CONNECTION TO STRUCTURE SAFETY SHAPE FACE STEEL POSTS

STANDARD APPROVED FOR USE --/----

REVISED:
DRAFT: 6/2004

STANDARD 617-28

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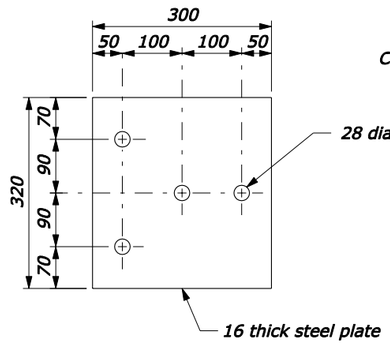
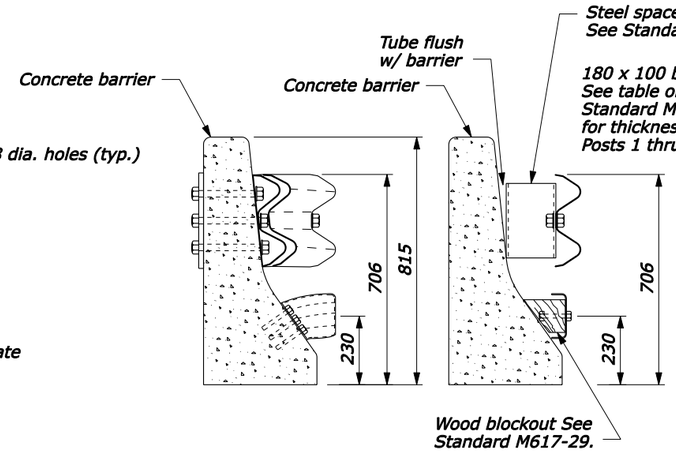
STATE	PROJECT	SHEET NUMBER

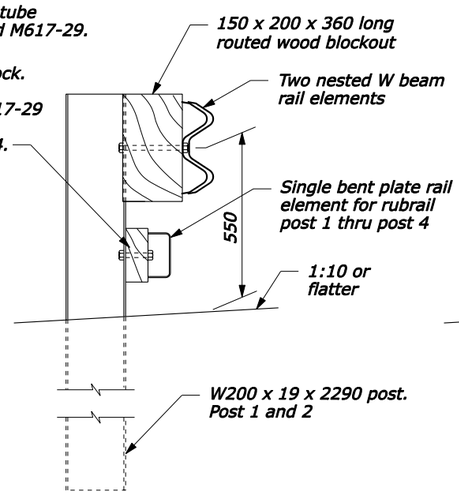


BEARING PLATE

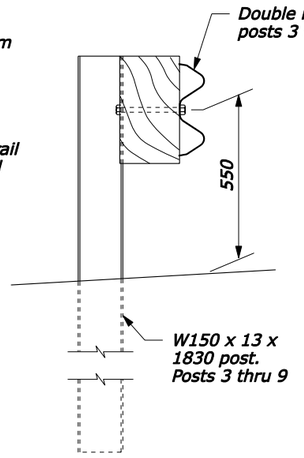


SECTION A-A

SECTION B-B



SECTION C-C



SECTION D-D

NOTE:

1. Posts 1 through 5 require an additional hole to attach lower wood blocks and/or rubrail.
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3. Do not bolt W beam to posts and blocks at posts 2 and 4.
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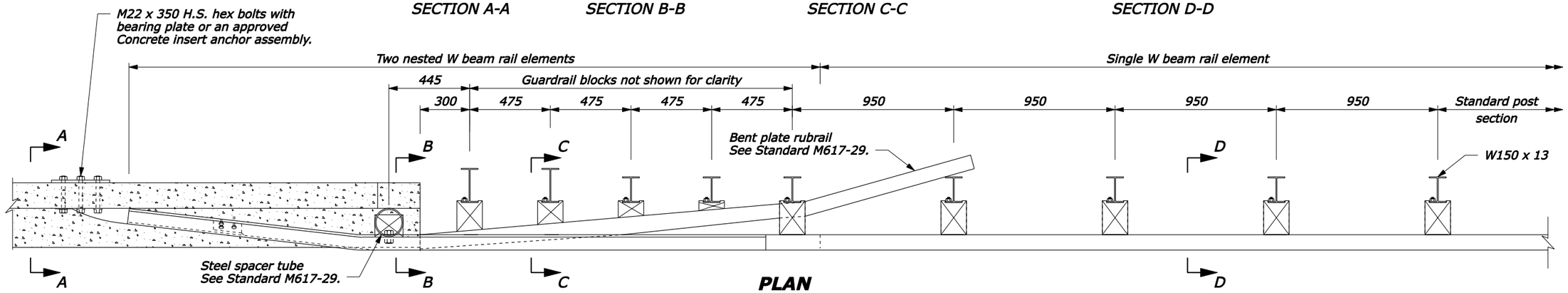
5. Furnish hardware in the metric sizes shown. Equivalent U.S. Customary sizes may be used when metric sizes are not available.
6. Dimensions without units are millimeters.



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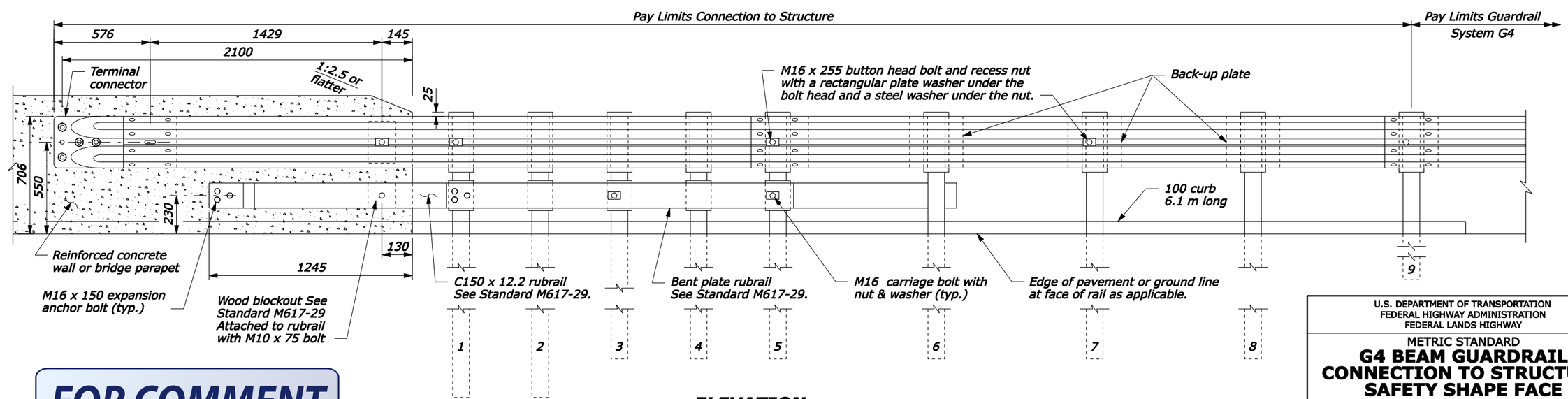

ELEVATION

NO SCALE

FOR COMMENT

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
FEDERAL LANDS HIGHWAY

METRIC STANDARD

G4 BEAM GUARDRAIL CONNECTION TO STRUCTURE SAFETY SHAPE FACE STEEL POSTS

STANDARD APPROVED FOR USE 3/1996

REVISED: 1/1998
DRAFT: 6/2004

STANDARD
M617-28